



ABOVE • Agency leadership supports the NIH Institute Relay. See story below.

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The Second Best Thing About Payday

nih record

Writer's Cramp Mapped to Brain Regions

By Rich McManus

The next time you have a pain in your hand from signing all those autographs or polishing up your latest novel, be happy that you don't have the neurological problem called writer's cramp—a disorder of motor coordination that some people experience after many years of writing. Your problem is in the hand and their problem is in the brain. But the exact way the brain malfunctions in writer's cramp is not yet understood.

Scientists have known since 1881 that Exner's area in the brain is involved in the ability to write fluently. But with the advent of such technologies as functional magnetic resonance imaging (fMRI) and positron emission tomography (PET), neuroscientists are pinning down more precisely the brain regions governing specific motor skills, including writing.

At its first gathering of the fall semester,

SEE **WRITER'S CRAMP**, PAGE 4



Dr. Silvina Horovitz of NINDS is studying writer's cramp and what it can tell us about the brain.

Relay Race: All Who Came Were Winners

The 28th running of the NIH Institute Relay on Sept. 22 served once again as an unofficial referendum on campus creativity and energy. As in years past, the event earned an A grade, partly because by now the participants and the people in charge have got the race down to, well, a science.

There was R&W President Randy Schools with the bullhorn in front of Bldg. 1, urging participants to have safe ½-mile circuits around Bldgs. 1, 2 and 3. Near him was Lt. Udon



Dr. Kenna Shaw, deputy director of The Cancer Genome Atlas Program Office, NCI, dressed in gold to amuse and inspire her teammates.

Two NIH Scientists Win 'Sammies'

Two NIH scientists are among nine federal workers honored with the 10th annual Samuel J. Heyman Service to America Medal, or "Sammies," conferred by the nonprofit Partnership for Public Service. The winners were feted at a gala downtown on Sept. 15.

Dr. William A. Gahl, clinical director at the National Human Genome Research Institute and director of the NIH Undiagnosed Diseases Program (UDP), won the award, along with Dr. C. Norman Coleman, associate director of the Radiation Research Program at the National Cancer Institute.

"I am delighted that the Partnership for Public Service has bestowed the Science and Environmental Medal to Bill Gahl for his work with the Undiagnosed Diseases Program and for his 30-year career at NIH," said NHGRI director Dr. Eric Green. "He is a model physician-scientist who tirelessly pursues understanding the genetic basis of rare diseases and developing new therapies for his patients. He ably leads



The NIH Record is recyclable as office white paper.

SEE **RELAY RACE**, PAGE 6

SEE **SAMMIE AWARDS**, PAGE 8



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briefs

NIH Research Festival Set, Oct. 24-28

The 25th annual NIH Research Festival is scheduled for Oct. 24-28. This week of activities highlights the scientific excellence of the Intramural Research Program. Events will include scientific symposia, poster sessions, NIH exhibitors, the vendor tent show and more.

The opening plenary session on Monday, Oct. 24 is titled Molecular Mechanisms of Human Disease. There will also be special exhibits on resources for intramural research. Concurrent symposia sessions that day include New Insights into Disease Pathogenesis and Treatment Through Genomewide RNAi Screening and Advances in Immune Targeted Therapies.

On Oct. 25, there will be a session on Improving Workplace Dynamics, plus another round of concurrent symposia on such topics as Computational Approaches to Study Protein Interactome in Context of Disease and Signals, Patterns: Basic and Clinical Research in Developmental Biology and Neural Plasticity in Sensation and Cognition. The FARE awards ceremony and reception will also be held Tuesday.

On Wednesday, Oct. 26, more poster sessions are planned along with 5 concurrent symposia on such topics as Advances in Rare Diseases Research and IPSC Cells for Screening and Therapy.

Thursday features the annual Technical Sales Association tent show (also set for Friday) and the NIH Core poster session.

For specific session times, locations and details, visit <http://researchfestival.nih.gov>.

Family Caregiver Day at CC, Nov. 8

In recognition of National Family Caregiver Month, the Clinical Center will host 2011 Family Caregiver Day on Tuesday, Nov. 8. The event will open with a guest lecture at 8 a.m. in Lipsett Amphitheater, Bldg. 10. Dr. Gary Epstein-Lubow, assistant professor in the department of psychiatry and human behavior, Alpert Medical School of Brown University and attending psychiatrist and assistant unit chief, Butler Hospital in Providence, R.I., will present issues on family caregiving including caregiver health, identifying at-risk caregivers, proven beneficial interventions and future research.

A caregiver Information Fair and Expo will follow from 10 a.m. to 2 p.m. on the 7th floor of the Clinical Research Center. CC departments and outside exhibitors will offer resources. No registration is needed. For more information, visit www.cc.nih.gov/wecare/ or contact Dr. Margaret Bevans, (301) 402-9383, or Leslie Wehrle, (301) 451-4077.

Symposium on Behavioral Science, HIV/AIDS

The Office of Behavioral and Social Sciences Research will hold a symposium on the contributions of behavioral and social science to HIV/AIDS research. The event "HIV/AIDS 2011 and Beyond: Propelling the Next Generation of Research with Behavioral and Social Science" will take place from 1 to 4 p.m. on Wednesday, Nov. 9 in Natcher Conference Center.

Commemorating 30 years since the first reported cases of HIV/AIDS in 1981, the symposium honors the contributions of behavioral and social science to HIV/AIDS research thus far and highlights ways in which it will continue to advance the understanding, treatment and prevention of the disease. Drs. Thomas Coates (UCLA), Wafaa El-Sadr (Columbia University), David Bangsberg (Harvard University) and Carl Dieffenbach (NIAID) will offer presentations on the role of behavioral and social science in HIV/AIDS research projects targeting three research and implementation goals: expanded testing, effective prevention tools and a cure.

No registration is required and the event is free and open to the public. For more information contact Dana Sampson at Sampsond@od.nih.gov.

Crabbe To Give Keller Lecture, Oct. 25

Dr. John Crabbe will deliver the 2011 Mark Keller Honorary Lecture on Tuesday, Oct. 25 at 1:30 p.m. in Lipsett Amphitheater, Bldg. 10. The title of his talk is "Translational Behavior-Genetic Studies of Alcohol: Are We There Yet?"



Crabbe is one of the world's leading experts in using animal genetic models to understand human dependence on alcohol. Through his extensive research over the past 30 years, he has helped transform our understanding of behavioral genetics. He pioneered several genetic procedures to identify the genes and neurobiological mechanisms underlying many different alcohol-related behaviors, including tolerance and withdrawal.

Currently, Crabbe is professor of behavioral neuroscience at Oregon Health & Science University, senior research career scientist at the Portland Veterans Affairs Medical Center and director of the Portland Alcohol Research Center, an NIH and NIAAA-sponsored research institute.

NIAAA established this lecture series as a tribute to Mark Keller, a pioneer in the field of alcohol research. Honorees are researchers who have made significant and long-term contributions to our understanding of alcohol's effects and how we can prevent and treat alcohol problems.

Twenty NIH-Supported Young Scientists Earn PECASE Honors

Three NIH intramural scientists and 17 grantees are among 94 researchers named by President Obama on Sept. 26 as recipients of the 2010 Presidential Early Career Awards for Scientists and Engineers, the highest honor bestowed by the United States government on science and engineering professionals in the early stages of their independent research careers. Awardees win 5 years of research funding.

The intramural honorees are Dr. Sonja M. Best, chief, innate immunity and pathogenesis unit, Laboratory of Virology, Rocky Mountain Laboratories (RML), NIAID; Dr. James L. Gulley, director, clinical trials group, and deputy chief, Laboratory of Tumor Immunology and Biology, NCI; and Dr. Hari Shroff, chief and investigator, section on high resolution optical imaging, NIBIB.

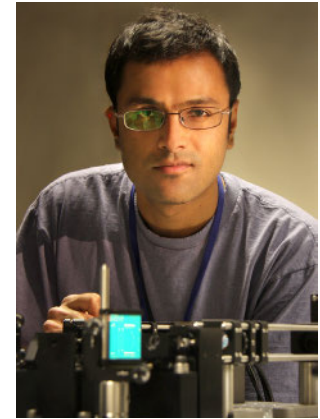
Best, the first scientist from RML to win the award, and her research group exploit flaviviruses, which include the tick-borne encephalitis complex of viruses and West Nile virus (WNV), as models of infection to identify cellular proteins involved in anti-viral defense as well as understand the ways in which viruses evade early antiviral responses. This knowledge will facilitate vaccine design and development of new therapies for treatment of infection.

In a recent study, Best's group discovered how flaviviruses are able to efficiently invade and spread in a host. "Cells are supposed to sound an alarm when a dangerous pathogen approaches, like pulling a fire alarm," she explains. "But WNV gets inside cells and silences the alarm so that the cell can't hear it, making it more vulnerable. We have made important progress in understanding how the virus does this."

This discovery and others in her lab have inspired new questions about flavivirus biology and pathogenesis that are being pursued by others in the field.

Gulley is especially interested in immunotherapy for prostate cancer. As director of the clinical trials group, he takes promising laboratory findings and uses them to design and conduct clinical trials. These studies involve the use of cancer vaccines and other immunostimulatory agents to modulate the immune response in cancer patients and the addition of other strategies to enhance vaccine-mediated killing.

He played a pivotal role in the clinical development of a prostate cancer vaccine created at NCI and is principal investigator on a global phase III randomized clinical trial of the vaccine. He is also



Intramural PECASE honorees (from l) Drs. Sonja Best, James Gulley and Hari Shroff

a senior investigator in NCI's Medical Oncology Branch.


Shroff's lab works to develop novel optical imaging tools/microscopes. "We work on two broad areas: improving spatial resolution, that is, seeing smaller and smaller biological structures, and improving temporal resolution—seeing dynamic biological events at high speed."

His group is developing a super-resolution optical technique for imaging structures 5-10 times smaller than the diffraction limit of a conventional optical microscope, i.e., 20-100 nanometers. "The technique we use most is photoactivated localization microscopy, initially prototyped at NIH by Eric Betzig, Harald Hess, Jennifer Lippincott-Schwartz and coworkers," said Shroff.

His group has also developed a "selective plane illumination microscope" that uses a thin sheet of light to illuminate living biological samples. "Our eventual goal is to build a dynamic 4-D atlas of brain development, highlighting the migrations and decisions of the neurons and their processes (axons) as the brain wires up in the embryo," said Shroff.

The extramural awardees (and their funding sources) include Dr. Ronnie E. Amaro, University of California, Irvine (OD); Dr. David T. Breault, Children's Hospital Boston (NIDDK); Dr. John S. Brownstein, Children's Hospital Boston (NLM); Dr. Brian S. Caffo, Johns Hopkins University (NIBIB); Dr. Nicola J. Camp, University of Utah (NCI); Dr. Pierre R. Comizzoli, Smithsonian Institution (NCRR); Dr. Chyke A. Doubeni, University of Massachusetts Medical School (NCI); Dr. Jose C. Florez, Massachusetts General Hospital and the Broad Institute (NIDDK); Dr. W. Nicholas Haining, Harvard Medical School (NIAID); Dr. Thomas L. Kash, University of North Carolina School of Medicine (NIAAA); Dr. John C. March, Cornell University (OD); Dr. Katherine L. O'Brien, Johns Hopkins Bloomberg School of Public Health (NIMHD); Dr. Carla M. Pugh, Northwestern University Feinberg School of Medicine (NIBIB); Dr. Jamie L. Renbarger, Indiana University (NICHD); Dr. Sara L. Sawyer, University of Texas at Austin, (NIGMS); Dr. Mary Jo Trepka, Florida International University (NIMHD); Dr. Linda E. Wilbrecht, University of California at San Francisco (NIDA).

The PECASE honor, established by President Clinton in 1996, is coordinated by the Office of Science and Technology Policy within the Executive Office of the President. Awardees are selected for their pursuit of innovative research at the frontiers of science and technology and their commitment to community service as demonstrated through scientific leadership, public education or community outreach.

Since the program began, NIH has funded a total of 193 PECASE recipients. The NIH-supported awardees, along with other scientists from a total of 16 federal agencies, will be honored by President Obama at a White House ceremony later this year. 

WRITER'S CRAMP

CONTINUED FROM PAGE 1

the FMRI/MRI PI (principal investigator) Seminar Series featured Dr. Silvina Horovitz of the human motor control section of NINDS's Medical Neurology Branch. She spoke Sept. 9 on "The Physiology of Task Specificity and its Pathophysiology in Writer's Cramp."

Horovitz and her colleagues are interested in understanding writer's cramp (which Dr. Mark Hallett, chief of the branch, says is considered a rare disease) and in using the ailment to probe deeper questions about how humans perform specific motor tasks.

Writer's cramp, a painless condition, is technically known as a type of focal hand dystonia (FHD) and is characterized by abnormal posture or movement. The focal dystonias typically start with a single task, but may spread to other tasks and may even eventually afflict limbs that are at rest, said Horovitz.

Two studies under way in Hallett's lab focus on right-hand FHD and involve both patients and normal controls, whose study results, when compared, help identify the brain networks involved when writing with the dominant hand.

Put simply, Horovitz and her colleagues are having study subjects complete simple tasks—writing, zig-zagging and tapping—with both their right and left hands, and also their right feet, then watching which areas in the brain show heightened activity.

"We want to know what areas in the brain map exclusively to writing," Horovitz explained.

As one might guess, writing was found to be more complex than zig-zagging or tapping, with the strongest difference in brainpower originating in the left putamen, but also in the supplementary motor area, Exner's area (Sigmund Exner, a Vienna-born physiologist, tied handwriting to a brain locale above Broca's area in a paper published in 1881, with Conrad Eckhard) and the supramarginal gyrus.

Further, subjects with writer's cramp had deficiencies of putamen activation and connectivity and deficits in functional connections to Exner's area, said Horovitz.

She and her colleagues are finding that handwriting, and likely any other task-specific activity, "requires more than a simple combination of effector (motor execution) and task."

Investigators in the human motor control sec-

tion are also conducting imaging studies to determine if there is a difference between writer's cramp and musician's cramp. In 2004, Hallett's lab was resoundingly credited with restoring to piano virtuoso Leon Fleisher the ability to use two hands at the keyboard. In gratitude for a therapy involving injections of botulinum toxin to free cramped muscles in his hand, Fleisher gave a free SRO performance in Masur Auditorium.

During a brief Q&A session, Hallett noted that writer's cramp is, for reasons unknown, the most common focal dystonia in India, and that texting (no surprise to the parents of teenagers), and any other repetitive activity, can result in focal dystonia. He said that typing can offer relief to those afflicted with writer's cramp and that the ailment is associated with a higher frequency of obsessive compulsive symptoms.

And sadly, you can't just give your hand a rest when writer's cramp shows up; it will return the next time you attempt to write, he said. ●

NIH Mentoring Program Invites Participants

Permanent federal employees interested in serving as mentors and mentees across the NIH community are invited to join the October 2011 cohort. Building a confidential, interactive relationship is the foundation of this program. The program's emphasis on developing core, leadership and management competencies at various levels will ensure a beneficial experience for both mentors and mentees. Program components include: senior-to-junior and peer-to-peer mentoring relationships, online application and matching system to connect individuals, mentor-mentee online orientation, 1-year mentoring relationship commitment and professional development events and activities.

As a tool in employee development, the NIH Mentoring Program does not supplant the NIH scientific mentoring and customized IC leadership mentoring programs that are available to employees in some institutes and centers. Instead, it is intended to fill any gaps where those programs do not exist and enables NIH-wide or even across-HHS relationships. The deadline for online registration and matching is Nov. 15. For more information, including links to online registration and upcoming information sessions, visit http://trainingcenter.nih.gov/hhs_mentoring.html.

Mental Health Services Research Conference Tackles 'Era of Change'

More than 300 researchers sought new ideas on "Improving Public Health in an Era of Change," the theme at the 21st NIMH Mental Health Services Research Conference held recently in Washington, D.C.

Science writer and *New York Times* bestselling author Chris Mooney presented the keynote, "Do Scientists Understand the Public?" Examining the differences in worldview among scientists and the public and exploring whose job it is to translate scientific findings into usable information, Mooney was joined by Richard Kravitz of the University of California-Davis. He discussed Mooney's points in the context of mental health care.

The session "What Stakeholders Need from Researchers" featured leaders representing health care policy makers and mental health service users and care providers. Judith Feder of the Georgetown Public Policy Institute, Daniel Fisher of the National Empowerment Center and Linda Rosenberg of the National Council for Community Behavioral Healthcare, talked about how constituents use research findings.

"Translating Research into Systemic Solutions to Improve Mental Health Care," a panel moderated by Benjamin Druss of Emory University, showcased partnerships between health care leaders addressing vexing public health issues and researchers in related fields.

In the closing plenary, Richard Frank of Harvard Medical School, Gregory Simon of the University of Washington and Jeanne Miranda of UCLA discussed "Mental Health Services Past, Present and Future: A Vision for the Next 20 Years."



NIMH branch chief Dr. David Chambers and conference co-chair Susan Azrin at the recent Mental Health Services Research Conference



New Class of Pioneer Awardees Named

Acting NIGMS director Dr. Judith Greenberg announced the latest group of Pioneer Award recipients at the program's annual symposium in September. Part of the Common Fund, the award supports exceptionally creative scientists who take highly innovative, and often risky or unconventional, approaches to major challenges in biomedical or behavioral research. NIH has made 111 Pioneer Awards since 2004, including 13 this year. In front are (from l) Andrew Feinberg, William Clemons, Brenda Bass, James Hildreth and David Schneider. At rear are (from l) Drs. Sharad Ramanathan, Tao Pan, Andreas Tolias, Mehmet Fatih Yanik, Florian Engert, Jean Bennett and Utpal Banerjee. Not pictured is Dr. Thanos Siapas. For details on the program and its newest recipients, see <http://commonfund.nih.gov/pioneer>.

Chinese Delegation Visits NIH

In the top photo, Dr. Yongxiang Lu (second from r), vice-chairman of China's National People's Congress standing committee and former head of China's national academy of sciences, and other senior Chinese officials met with NIDDK director Dr. Griffin Rodgers (second from l) and his staff recently to discuss common research interests in diabetes and obesity and to tour NIH's Metabolic Clinical Research Unit (MCRU). Obesity is a major risk factor for type 2 diabetes, a serious and increasing health problem in the United States and in China, where 92 million people (9.7 percent of adults) have type 2 diabetes and another 148 million (15.5 percent) have pre-diabetes. In the photo at right, Lu speaks with NIDDK's Dr. Kong Chen during a tour of the Clinical Research Center, including the MCRU.



Right:

NIH director Dr. Francis Collins poses with The Cbl Shepherds from Bldg. 37's Laboratory of Cellular & Molecular Biology (LCMB). Cbl, pronounced like the actress they represent "Cybill," is an enzyme studied in LCMB that regulates growth factor receptors and T-cell activation. LCMB entered 3 teams this year, including We Ran Dishevelled and Chemotaxis. "Our teams represent 8 different labs, so it really brings us all together and many from the labs show up to cheer us on," said Dr. Stephen Kales. The Cbl Shepherds are (from l) Kales, Nathan Coussens, Ana Rodriguez-Pena, Eilon Sherman and Lakshmi Balagopalan.

**Top 10 Finishers**

Catch Me If You Can(cer)	13:05
Run Like the Winded	14:09
Progressive Motility (PR)	14:45
Tract Stars	15:10
Proud Snail Hunters	15:11
LBC: Get Your Func-Con	15:43
"T"he Regulators	15:50
The Yewninks	15:51
Pumped Up Kicks	15:52
FTP: For-the-Pride	16:10

RELAY RACE

CONTINUED FROM PAGE 1

Cheek of the NIH Police, who since 2000 has provided un-authoritarian authority, principally by keeping people out of the way of traffic via walkie-talkie chats with his fellow officers stationed around the race course.

The godparents of campus fitness—Jerry Moore and Dr. Alison Wichman, who were long-time members of the NIH Health's Angels Running Club—headed up a cadre of some two dozen volunteers and represented an era when campus runners were fond of—wink, wink—L.S.D., or long slow distances.

Missing this year from his usual post at the finish line was FDA's Dr. Phil Snoy, who died on Aug. 15 and in whose memory the 2011 race was conducted. Just as Schools asked the assembled runners to pause for a moment of silence, two large trucks rumbled past, drowning out his remarks. Schools saw Snoy in the happenstance: "Phil would be out here cracking jokes," he said.

Two of the 103 teams entered in this year's race honored Snoy in their names and T-shirts: Snoyz Boyz and Phil's Phlying Monkeys.

NIH director Dr. Francis Collins whistled the start of the event's first heat, which produced the winner, NCI's Catch Me If You Can(cer) in a time of 13:05. The second heat, begun by NIH deputy director for intramural research Dr. Michael Gottesman, yielded second- and third-place finishers Run Like the Winded (14:09) and Progressive Motility (PR) (14:45).

The fastest first lap of the race, for men, was 2:13 for Lionel Rauth of LBC: Get Your Func-

Con. The blazingest female first-lapper was Andrea Fischione (2:48) of Run Like the Winded.

But it was the care given to costume that, for many participants, won the day. T-shirt art ranged from the collectible (The Sensation Seekers) to the Kinko's (Gottesman's Gang simply



Dr. Nigel Crawford donned a Cap'n Crunch outfit as titular head of Cap'n Crunch and the Cereal Killers, an NHGRI team.

taped paper labels to the backs of their shirts). Son of a Snitch applied their team name to their calves, using markers. The Cbl Shepherds, in cascading blonde wigs, impersonated eighties TV star Cybill Shepherd. And in another nod to popular culture, Cap'n Crunch (NHGRI's Dr. Nigel Crawford) showed up to lead his team, The Cereal Killers.

The race is perhaps best known for accommodating all ages, shapes and abilities, from the serious competitor in Spandex and Under Armour (said one woman, observing a runner's jackrabbit start, "She's *runnin'* runnin'") to the casual athlete, who may have been drafted on race day itself. One guy took off from the starting line at least 2 minutes after his heat had begun; several people ran in street clothes.

Though fashion may have taken a beating, no one was injured or fell ill due to the heat and humidity, said Cheek, who confirmed with members of the NIH Fire Department that no calls were run on race day.

The race included the usual raft of creative team names, but one stood out as particularly sweat-stained: Oh si, I see bee. Bee see bee? Bee! Run!!, representing NIAID's Office of Cyberinfrastructure and Computational Biology, Bioinformatics and Computational Bioscience Branch. Get it?—Rich McManus



The team HAART and Soles, like many race attendees, documented the event with hand-held devices. Here, runners (from l) Dr. Irini Sereti, Tiffany Tanzosh and team captain Catherine Rehm watch a race video. Said Rehm, "The photographer caught us reviewing Tiffany's finish video."

Right:

Third place finisher was Progressive Motility (PR), consisting of (from l) Neil Perkins, Katherine Bowlers, Anna Pollack, Amanda Filiberto and Alex McLain.

PHOTOS: ERNIE BRANSON



Winning team Catch Me If You Can(cer) included (from l) Steven Moore, Paige Miller, Naoko Ishibe, Benjamin Emmanuel and Frank Perna.



Placing second was Run Like the Winded, including (from l) Mario Cedillo, Dimitre Simeonov, Rob Carpenter, Andrea Fischione and Sharon Romano.



SAMMIE AWARDS

CONTINUED FROM PAGE 1

the internationally recognized NIH Undiagnosed Diseases Program that seeks to establish the cause of diseases that have eluded diagnosis. He is certainly worthy of a national award of this caliber.”

Attending the award presentation was Sally Massagee, a UDP patient and a resident of North Carolina. Her amyloidosis—a rare condition that causes build-up of immunoglobulin proteins in some blood vessels—was diagnosed in 2009, leading to a treatment that has restored her health.

“Dr. Gahl created the UDP and it literally saved my life,” said Massagee. “Thirteen different specialists said to me, ‘Something is wrong, it is not my field, goodbye.’ I can’t convey to you the loss, the grief, the fear, the pain and the heart-break that I felt as my body failed more and more quickly. The UDP gave me hope; the UDP gave me my life.”



Dr. William Gahl (l) accepts the Service to America Award in the company of UDP patient Sally Massagee and Rep. Chris Van Hollen (D-MD).

PHOTOS: SAM KITTNER/KITTNER.COM

NCI’s Coleman, recipient of the Partnership’s Homeland Security Medal, is a radiation oncologist who developed a comprehensive blueprint to prepare U.S. government and emergency responders for terrorist attacks involving radiological or nuclear materials. Earlier this year, he assisted in Japan’s response to radiation resulting from the earthquake and tsunami-damaged nuclear power plants.

The emergency response plans that Coleman and his team use are built from the best available science. The team works with NCI and the Centers for Medical Countermeasures Against Radiation, NIAID. They rely on advanced development support from the HHS Office of the Assistant Secretary for Preparedness and Response. This builds on the concept of “dual-utility” so that investments in cancer research and emergency response benefit one another.

“The recipients of the Service to America Medals showcase the good that government does, which positively affects our lives every day,” said Max Stier, Partnership for Public Service president and CEO. “By honoring these outstanding public servants, we give America’s fed-



NCI’s Dr. C. Norman Coleman (l) accepts the 2011 Homeland Security Service to America Medal following remarks by Secretary of Energy Dr. Steven Chu (r).

eral heroes the long overdue thanks and recognition they deserve.”

The Partnership reviewed the accomplishments of more than 400 nominees whose contributions have had a profound impact on the health, safety and well-being of Americans. 🌟

Annual Leave: Use It or Lose It

Annual leave in excess of the maximum carryover balance (in most cases 240 hours) is normally forfeited if not used by the end of the current leave year. If you have not already planned to take those excess hours of annual leave, you should discuss your leave with your supervisor now while there is still time to schedule it. Your bi-weekly Leave and Earnings Statement tells you how much annual leave you must use so that you will not lose it when the leave year ends on Saturday, Dec. 31, 2011.

In spite of planning, circumstances sometimes arise that prevent you from taking leave that has been scheduled and approved earlier during the leave year. In such cases, you and your supervisor are jointly responsible for ensuring that any “use or lose” leave is officially rescheduled. This year, your “use or lose” leave must be scheduled not later than Saturday, Nov. 19.

If you or your supervisor have questions about “use or lose” leave, contact your administrative officer.



feedback

Have a question about some aspect of working at NIH? You can post anonymous queries at www.nih.gov/nihrecord/index.htm (click on the Feedback icon) and we'll try to provide answers.

Feedback: Is there a reason why they are removing the bricks from parts of the Magnuson section of Bldg. 10? We were given no warning that this was going to happen and the noise of the jack-hammering makes it hard to do research and support the mission of NIH. Are new bricks going back up, or the old?

Response from the Office of Research Facilities: Three rows of bricks and windows on the south facade of Bldg. 10 will be removed and replaced with horizontal louvers as part of the F-wing renovation of former patient care areas into lab and lab support spaces. These louvers are for intake of fresh air into the building air-handling systems that will be located on floors 4, 9 and 13.

In addition, brick is being removed from the west side of the G-wing, in preparation for the construction of a new exterior shaft for steam and chilled water piping for the F-wing project.

There are a number of projects currently under way in Bldg. 10 and the ACRF. It is not possible to comment on the noise complaint without knowing where the occupant is located and when the noise occurred. The F-wing project team is working with the contractor, facility manager and the Division of Occupational Health and Safety, ORS, to restrict daytime noise to essential operations.

Feedback: I am really shocked by the number of people that I still see smoking on campus. You can smell smoke just about anywhere and most people do not even try to hide the fact they are smoking. Are certain people exempt from this new rule? I must say that not a day goes by that I don't see someone smoking. Please do something about this.

Response from the Office of Research Services: Since the implementation of the NIH Tobacco Free Policy in 2008, there has been a precipitous decline in the number of individuals overtly smoking on the Bethesda campus. With this decline, the number of individuals exposed to second-hand smoke has also dropped sharply.

NIH has collective bargaining agreements with unions representing employees who work at NIH. Until the Tobacco Free Policy can be made a part of all these agreements, there will be individuals who are allowed to smoke on the campus as long as they abide by the previous NIH Smoking Policy.

The NIH Tobacco Free Policy (<http://tobaccofree.nih.gov/tfpolicy.htm>) is an administrative policy and, as such, it is the responsibility of every employee to become fully aware of its tenets and comply with them. Similarly, it is the responsibility of every manager and supervisor to ensure that the NIH staff reporting to them are aware of all NIH policies and to

take appropriate action if they become aware that one or more of their staff is not in compliance.

In general, employee compliance with the NIH Tobacco Free Policy has been outstanding. We certainly do not have 100 percent compliance but the atmosphere is markedly cleaner and safer. 🗨️

Project to Improve NIH Web Sites Presents Findings at Two Meetings

Results of the Project to Improve NIH Web Sites are in. This evaluation study examined how to enhance and strengthen NIH's 1,700 public-facing sites and online initiatives through digital measurement. The recommendations offer options for using evidence-based approaches to guide strategic decisions about web sites and online initiatives.

Web and communications teams, managers and everyone else with an interest in providing citizens with the best possible service through NIH web sites are invited to attend presentations that will be offered on Tuesday Oct. 25 at 10 a.m. at Neuroscience Center (Rm. A1-A2) and Wednesday, Oct. 26 at 10 a.m. on campus in Bldg. 50 (Rm. 13-28).

The same presentation will be offered both days. It will include an overview of the project, results and recommendations for improving the quality, consistency and comparability of web site measurement throughout NIH.

If you have questions about this project or upcoming presentations, contact Ann Poritzky at poritzky@mail.nih.gov or (301) 496-0959.

Tae Kwon Do Beginner's Class

The NIH Tae Kwon Do School is offering a beginner's class for adults and mature teens on Monday evenings through October. The curriculum combines traditional striking arts, forms, sparring and basic aikido techniques with emphasis on self-defense. No experience is necessary. Classes meet in the Malone Center (Bldg. 31C, B4 level, next to the NIH Fitness Center) from 6 to 8 p.m. on Mondays and 6 to 7 p.m. on Wednesdays (6-7 p.m. Fridays, optional). Registration fee is \$50 and includes 10 weeks of beginner's class and a uniform costs \$40. Interested persons are welcome to watch regular training sessions. For information call Lewis Slotter, (301) 213-5841, or visit www.recgov.org/r&w/nih-tae-kwondo.html.



A genetic variant may explain why some people with asthma do not respond well to inhaled corticosteroids, the most widely prescribed medicine for long-term asthma control.

NIH-Funded Study Connects Gene Variant to Response to Asthma Drugs

A genetic variant may explain why some people with asthma do not respond well to inhaled corticosteroids, the most widely prescribed medicine for long-term asthma control. Researchers found that asthma patients who have two copies of a specific gene variant responded only one-third as well to steroid inhalers as those with two copies of the regular gene.

This genome-wide association study, funded by NHLBI, analyzed data from over 1,000 people enrolled in five separate clinical trials that studied different steroid treatments for asthma. The study was also funded by NHGRI and the NIH Pharmacogenomics Research Network. The results appeared in the Sept. 26 online edition of the *New England Journal of Medicine*.

"This finding helps to explain the genetic basis for the long-standing observation that some people do not respond well to what is a common asthma treatment," said Dr. Susan Shurin, acting NHLBI director. "The study illustrates the importance of research examining the relationship between genetic makeup and response to therapy for asthma and underscores the need for personalized treatment for those who have it."

New Technique Identifies First Events in Tumor Development

A novel technique that enables scientists to measure and document tumor-inducing changes in DNA is providing new insight into the earliest events involved in the formation of leukemias, lymphomas and sarcomas and could potentially lead to the discovery of ways to stop those events.

Developed by a team of researchers at NIAMS, NCI and Rockefeller University, the technology focuses on chromosomal rearrangements known as translocations. Translocations occur when a broken strand of DNA from one chromosome is erroneously joined with that of another chromosome. Sometimes these irregularities can be beneficial in that they enable the immune system to respond to a vast number of microorganisms and viruses. However, translocations can also result in tumors.

The findings were reported in the Sept. 30 issue of the journal *Cell*.


Translocations can take place during the course of normal cell division, when each chromosome—"a single strand of DNA containing many genes"—is copied verbatim to provide genetic information for the daughter cells. Sometimes, during this process, byproducts of normal metabolism or other factors can cause breaks in the DNA.

"The cell expresses specific enzymes whose primary purpose is to repair such lesions effectively, but when the enzymes mistakenly join pieces of two different chromosomes, the cell's genetic information is changed," said NIAMS's Dr. Rafael Casellas. He likens the phenomenon to breaking two sentences and then rejoining them incorrectly. For example, "The boy completed his homework." and "The dog went to the vet." might become "The dog completed his homework." or "The boy went to the vet." When a cell gets nonsensical information such as this, it can become deregulated and even malignant.

Genetic Mutation Linked to Inherited Forms of ALS, Dementia

NIH scientists and worldwide teams of researchers have identified the most common genetic cause known to date for two neurological diseases, amyotrophic lateral sclerosis (ALS) and frontotemporal dementia (FTD). The discovery offers clues to underlying mechanisms of these diseases and may eventually contribute to the design and testing of possible therapies. The research results appeared online in *Neuron* on Sept. 21.

Researchers found that a mutation on a single gene, C9ORF72 on the short arm of chromosome 9, accounts for nearly 50 percent of the directly inherited, familial ALS and FTD in the Finnish population and more than a third of familial ALS in other groups of European ancestry. The mutation, called a hexanucleotide repeat expansion, is an unusual one that involves repeating a DNA sequence over and over again. The researchers also found these mutations in Finnish people with the more common, sporadic form of ALS.

"Identifying this defective gene common to both the inherited forms of ALS and FTD and the sporadic form of ALS provides important new insights into the development of these neurodegenerative diseases," said NIA director Dr. Richard Hodes. "We still have much to learn about the complex interplay between genetic risk for a disorder and the other factors that determine disease onset and progression. But finding these types of mutations is critically important to a better understanding of disease mechanisms so that we can ultimately target disease biology to develop therapeutics." 

milestones

Nakamura Named CSR's Acting Director

Dr. Richard Nakamura is now acting director of the Center for Scientific Review. NIH director Dr. Francis Collins made the appointment to replace CSR director Dr. Toni Scarpa, who retired Sept. 2.



Nakamura has had a 35-year tenure at the National Institute of Mental Health, where he has served as both scientific director and deputy director; he served as acting director from 2001 to 2002.

"I appreciate Richard's willingness to lead CSR in this transitional period," said Collins. "He received various professional and government awards, including the Presidential Rank Award for outstanding leadership."

Nakamura will lead CSR's 450 scientists and administrative staff, overseeing their efforts to manage 80,000 incoming NIH grant applications a year and review the majority of them in CSR peer review groups. CSR holds 1,600 review meetings a year, involving about 18,000 reviewers from the scientific community.

"I look forward to working with the many dedicated individuals engaged in this great enterprise," said Nakamura. "It's a privilege to help NIH identify research with the most promise for making our world more healthy and productive."

Nakamura came to NIMH in 1976 as a postdoctoral fellow. In the mid-1980s, he coordinated NIMH's Biobehavioral Program and later was chief of its Integrative Neuroscience Research Branch. Between 1997 and 2007, he served as the institute's deputy director. From 2007 to 2011, he has been institute scientific director. While at NIMH, he also has held other positions, including associate director for science policy and program planning; chief, Behavioral and Integrative Neuroscience Research Branch; and coordinator, ADAMHA Office of Animal Research Issues.

Nakamura earned his B.A. in psychology from Earlham College in Richmond, Ind., his M.A. in psychology from New York University and his Ph.D. in psychology from the State University of New York at Stony Brook.

He has expertise in a number of areas including cognitive and comparative neuroscience, science policy/funding and ethics in science. He has published 30 peer-reviewed scientific journal articles, most related to neurocognition in primates.



NIAAA acting director Dr. Kenneth Warren (second from r) welcomes new NIAAA council members (from l) Dr. Andres Gil, Dr. Suzanne De La Monte and Dr. Andrea Barthwell. Not shown is Dr. Cindy Ehlers.

NIAAA Council Gets New Members

NIAAA recently welcomed four new council members.

Dr. Andrea Barthwell is founder and CEO of the global health care and policy consulting firm EMGlobal LLC. She also has served as deputy director for demand reduction in the Office of National Drug Control Policy and was a principal advisor in the Executive Office of the President on policies aimed at reducing the demand for illicit drugs.

Dr. Suzanne De La Monte is a professor of pathology & clinical neuroscience, Brown University Medical School & Rhode Island Hospital. In her research career of more than 25 years in neurodegeneration, alcohol research and metabolism, she has authored and co-authored over 217 publications in such journals as the *Journal of Neurological Science*, *Journal of Clinical Investigation* and *Journal of Gastroenterology and Hepatology*.

Dr. Andres Gil is vice president for research at Florida International University. As an educator, social worker and advisor to the Mental Health Services Administration and NIMH on issues pertaining to at-risk youth, Gil has co-authored numerous articles that examine the role of culture, race and ethnicity in current social problems.

Dr. Cindy Ehlers is a professor in the department of molecular and integrative neurosciences, and molecular and experimental medicine at the Scripps Research Institute and director of the laboratory of translational neuropharmacology. Among her research projects are translational studies on the toxic effects of alcohol and other drugs on development in animal models. ①



Five students from the Commonwealth of the Northern Mariana Islands participated in the 2011 NIDDK Short-Term Education Program for Underrepresented Persons, the first time students from CNMI have taken part in the program. The students are (from l) Genevieve Gottwald, Richeena Farrell, Chasy Amado, Claudette San Nicolas and Mariah Barcinas.

Northern Mariana Islands Students Step Toward Science at NIH

By Rachel Greenberg

One by one, dressed in stiff white lab coats, they took their place at the lectern in the Natcher Conference Center lecture room. One by one, they presented their summer research studies to their peers from around the U.S. and two scientist “judges.”

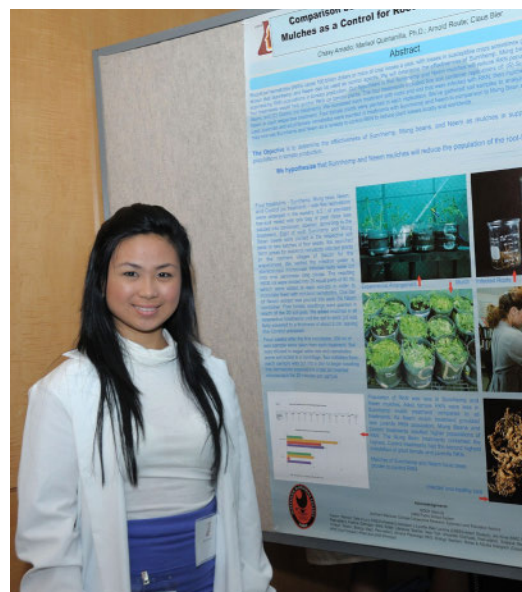
After traveling nearly 8,000 miles, five high school students from the Commonwealth of the Northern Mariana Islands (CNMI) took their first big step toward pursuing careers in science. At the same time, they inaugurated the first year of the NIDDK Short-Term Education Program for Underrepresented Persons (STEP-UP) high school section’s expansion to the CNMI, a set of islands in the Pacific north of Guam.

“With STEP-UP, we seek to provide opportunities for students from groups underrepresented in the biomedical sciences. Students from the Northern Mariana Islands deserve the chance to develop their scientific skills and, hopefully, develop a love for research, just as their peers from the rest of the United States do,” said Dr. Lawrence Agodoa, director of NIDDK’s Office of Minority Health Research Coordination, which sponsors the programs. “Their participation helps bring to fruition our goal to provide opportunities to do cutting-edge research to people who otherwise might not have exposure to the scientific process in action.”

STEP-UP is designed to provide short-term research education for high school students from racial and ethnic minority, disabled or disadvantaged backgrounds. Students receive financial support during the summer for 8 to 10 weeks of basic or clinical research education and training from faculty active in research related to NIDDK’s mission. This year, some students were aided by Recovery Act funds.

Chasy Amado, an incoming freshman at the University of Guam, led off the CNMI students’ presentations with her agricultural research, done under the tutelage of her mentor, Dr. Marisol Quintanilla of Northern Marianas College. “I never thought I would encounter hands-on agricultural activities in the research program,” said Amado. “This research allowed me to work with an experienced scientist and challenged me to expand my horizons, since I had no knowledge of this field.”

After delivering her presentation and answering the NIH scientists’ questions, Amado breathed a sigh of relief. “The highlight of my trip was definitely the idea that I was able to develop my public speaking and socializing skills,”



Amado displays a poster on her summer research, completed as part of NIDDK’s STEP-UP efforts.

PHOTOS: BILL BRANSON, ERNIE BRANSON

she said. “I was always a quiet and shy student who lacked confidence during presentations and I feel more than proud of the fact that I got to overcome that.”

Dr. George Hui, a research professor at the University of Hawaii, has been the STEP-UP program director for students in Hawaii, Alaska and Puerto Rico. Now he’s also overseeing the Pacific islands program.

“For me, this is a milestone,” Hui said. “It has been over 3 years from the inception of the idea that STEP-UP should reach out to the Pacific islands to this first year participation of CNMI students. I do hope that after this experience, the CNMI students would come to know and believe that they are just as capable as the mainland U.S. students in doing science, even though they don’t have the resources to do the cutting-edge research available to mainland students.”

Despite limited resources, the CNMI students completed research studies relevant to island life. With the high prevalence of diabetes posing a major public health problem in the CNMI, Genevieve Gottwald studied the history and causes of diabetes prevalence. Claudette San Nicolas studied the use of traditional healer herbs and modern prescription medicine in treating diabetic foot disease. Mariah Barcinas and Richeena Farrell rounded out the five student-researchers.

All of the CNMI students agreed they would recommend STEP-UP to their peers. Amado would like to return to the STEP-UP college program next year if she can, saying, “The best part of the experience was meeting different and unique people who share the same inspiration with science research.”